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09/05/2006

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EXAMINER

BELLAMY, TAMIKO D

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/843,046

Applicant(s)

SHIBATA ET AL.

Examiner

Tamiko D. Bellamy

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Amendment dated 6/16/06 has been received and entered. Claim 2 has been canceled.

Claims 1, and 3-19 are currently pending.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 3, 5, and 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Baba et al. (6,085,598).

Re claim 1, Baba et al. discloses in Figs. 2, 3B, and 3C, 8, 5, a base (e.g., stem 14). Baba et al. discloses a pressure sensitive section (e.g., combination of sensor element (15) including a pressure-sensitive chip (e.g., pressure responsive element (12) and a stand (e.g., glass base 13), which receives pressure and is mounted on the base

(e.g., stem 14). Baba et al. discloses a port (e.g., inlet port 3) through which gas to be measured is injected into the pressure sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12)). Baba et al. discloses a sensor package (e.g., combination of cover (20) and housing (6) encloses the pressure sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12)) and forms the port (e.g., inlet port 3). Baba et al. discloses a lead (e.g., wire 17) connected to a pressure sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12)) and extracts a pressure detection signal (Col. 4, lines 37-40). As depicted in figs., 2, and 3B, Baba et al. discloses the pressure sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12) and glass base (13)) and the sensor package (e.g., combination of cover (20) and housing (6)) are affixed to the base (e.g., stem 14) by a fluoroc elastomer (e.g., fluorine-based adhesive (16a, 16b))(Col. 4, lines 28-41).

Re claim 3, as depicted in figs. 2 and 3B, Baba et al. discloses a lead (e.g., wire 17) connects the terminal (10) of the pressure-sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12)) to a wire, which is provided on the base (e.g., stem 14). Baba et al. discloses that the pressure-sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12) and glass base (13)) and the lead (e.g., wire 17) are covered by a resin (e.g., silicone gel 18) (Col. 4, lines 41-44).

Re claim 10 Baba et al. discloses a pressure sensor is exposed to a gas to be measured (Col. 4, lines 11-17).

Re claim 11, Baba et al. discloses in Figs. 2, 3B, and 3C, 8, 5, a base (e.g., stem 14). Baba et al. discloses a pressure sensitive section (e.g., combination of sensor element (15) including a pressure-sensitive chip (e.g., pressure responsive element (12) and a stand (e.g., glass base 13), which receives pressure and is mounted directly on the base (e.g., stem 14). Baba et al. discloses a port (e.g., inlet port 3) through which gas to be measured is injected into the pressure sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12)). Baba et al. discloses a sensor package (e.g., combination of cover (20) and housing (6) encloses the pressure sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12)) and forms the port (e.g., inlet port 3). Baba et al. discloses a lead (e.g., wire 17) connected to a pressure sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12)) and extracts a pressure detection signal (Col. 4, lines 37-40). As depicted in figs., 2, and 3B, Baba et al. discloses the pressure sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12) and glass base (13)) and the sensor package (e.g., combination of cover (20) and housing (6)) are affixed to the base (e.g., stem 14) by a fluoroc elastomer (e.g., fluorine-based adhesive (16a, 16b))(Col. 4, lines 28-41).

Re claim 12, as depicted in figs. 2 and 3B, Baba et al. discloses a lead (e.g., wire 17) connects the terminal (10) of the pressure-sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12)) to a wire, which is provided on the base (e.g., stem 14). Baba et al. discloses that the pressure-sensitive section (e.g., combination of sensor element (15) including pressure responsive element

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(12) and glass base (13)) and the lead (e.g., wire 17) are covered by a resin (e.g., silicone gel 18) (Col. 4, lines 41-44).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-7, and 13-16 are rejected under 35 U.S.C. 103(a) as being obvious over Baba et al. (6,085,598) in the view of Kato (JP06213742A).

Re claims 4 and 13, Baba et al. discloses that the pressure-sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12)) and the lead (e.g., wire 17) are covered by a resin (e.g., silicone gel 18) (Col. 4, lines 41-44).

Baba et al. lacks the detail of the fluoroc gel resin. As depicted in fig. 1, Kato et al. discloses a fluoroc gel (e.g., protective film of fluororesin film 7) covering the pressure sensitive section (e.g., sensor chip 1 having a strain gauge formed on the surface).

Therefore, to modify Baba et al. by employing resin that is a fluoroc gel would have been obvious to one of ordinary skill in the art at the time of the invention since Kato teaches a pressure sensor having these design characteristics. The skilled artisan would be motivated to combine the teachings of Baba et al. and Kato since Baba et al. states that his invention is applicable to pressure sensor for detecting gas pressure in reference to the atmospheric pressure and Kato is directed to a pressure sensor for detecting atmospheric pressure.

Re claims 5-7, and 14-16, as depicted in fig. 2, Baba et al. discloses a fluoroc elastomer (e.g., fluorine based adhesive (16a, 16b)), which affixes the pressure sensitive section (e.g., combination of sensor element (15) including pressure responsive element (12)) to the base (e.g., glass base 13), and the base (13) to the sensor package (e.g., combination of cover (20) and housing (6)). Baba et al. also discloses that the fluoroc elastomer (e.g., hardened fluorine-based adhesive 16b) is covered by a silicone gel (18), and the silicone gel (18) is hardened by heating (Col. 4, lines 41-44). One having ordinary skill in the art knows that a fluoroc elastomer (e.g., fluorine-based adhesive 16b) is harder after solidification than a silicone gel. Baba et al. lacks the detail of a fluoroc gel. As depicted in fig. 1, Kato et al. discloses a fluoroc gel (e.g., protective film of fluororesin film 7) covering the pressure sensitive section (e.g., sensor chip 1 having a strain gauge formed on the surface); the sensor (1) and the base (2) are both affixed to the sensor package (3). Therefore, to modify Baba et al. by employing resin that is a fluoroc gel would have been obvious to one of ordinary skill in the art at the time of the invention since Kato teaches a pressure sensor having these design characteristics. The skilled artisan would be motivated to combine the teachings of Baba et al. and Kato since Baba et al. states that his invention is applicable to pressure sensor for detecting gas pressure in reference to the atmospheric pressure and Kato is directed to a pressure sensor for detecting atmospheric pressure.

6. Claims 8/1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baba et al. (6,085,598) in view of Nomura et al. (5, 948,991).

Re claims 8/1 and 9, Baba et al. discloses that the pressures sensor is used to detected gas vapor pressure introduced from a conduit connecting to a gasoline tank and a canister) (Col. 4, lines 7-17). While, Baba et al does not specifically disclose that the pressure sensor is used in measuring aspired air of an engine, or provided in the aspired air manifold, the device of Baba et al. would operate equally as well. Evidence of the can be found where gas to be measured is the introduced from an inlet port (3) (See Col. 3, lines 60-63). Nomura et al. discloses that the pressure sensor is used for air gas intake of an engine (Col.. 6, lines 9-19). Therefore, to modify Baba et al. by employing a pressure sensor used in an engine would have been obvious to one of ordinary skill in the art at the time of the invention since Nomura et al. teaches a pressure sensor having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Baba et al. and Nomura et al. since Baba et al. states that his invention is applicable to pressure sensor used in an detecting pressure within the internal portion of a automotive vehicle and Nomura et al. is directed to detecting intake pressure of an engine of an automobile.

***Response to Remarks***

7. Applicant's arguments filed 6/16/06 have been fully considered but they are not persuasive.

Re claims 1, 3, 5, and 10, the applicant argues that the examiner identifies Baba et al. as disclosing a pressure responsive element ((12) and a glass base (13). Applicant argue that Baba et al. reference does not discloses a pressure sensitive chip that is supported by a stand and mounted on a base. **See number 3, wherein further review of the amended claims, the examiner identifies Baba et al. as discloses a pressure sensitive section (e.g., combination of sensor element (15) including a pressure-**



**sensitive chip (e.g., pressure responsive element (12) and a stand (e.g., glass base 13), which receives pressure and is mounted on the base (e.g., stem 14).**

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Monday - Friday 7:30 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamiko Bellamy

T.B.

August 30, 2006

A handwritten signature in black ink, appearing to read 'Hezron Williams', with a long horizontal line extending to the right.

HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800